

Notice of Allowability

Application No.

10/731,747

Examiner

Toniae M. Thomas

Applicant(s)

TAMURA, KAZUHIRO

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 08 November 2005.
2. ☒ The allowed claim(s) is/are 14-17,21,22 and 25.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/260,484.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 01232006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Mary Wilczewski
Primary Examiner

EXAMINER'S AMENDMENT

1. This application is in condition for allowance except for the presence of claims 18-20, 23, 24, and 26 non-elected without traverse. Accordingly, claims 18-20, 23, 24, and 26 have been cancelled.

Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Norman P. Soloway on 23 January 2006.

The application has been amended as follows:

In Claims

In claim 14, line 3, "said" has been changed to --a-- before
"semiconductor substrate";

In claim 14, line 5, "silicon" has been changed to --semiconductor--
before "substrate";

In claim 14, line 10, "across" has been changed to --along-- after
"uniform" and before "the entirety";

In claim 21, line 6, "silicon" has been changed to --semiconductor--
after "said" and before "substrate";

In claim 21, line 12, “across” has been changed to --along-- after
“uniform” and before “the entirety”;

In claim 25, line 12, “across” has been changed to --along-- after
“uniform” and before “the entirety”;

Claims 18-20, 23, 24, and 26 have been cancelled.

Reasons for Allowance

3. The following is an examiner’s statement of reasons for allowance: the prior art of record does not anticipate or render obvious a method of fabricating a semiconductor device substantially as claimed. For example, the Chen et al. patent (US 6,093,618) discloses a method of fabricating a trench isolation structure in a semiconductor device (see figs. 2A-2E and accompanying text). The method comprises: forming a trench 207 for isolation in a semiconductor substrate 200 (Fig. 2A and col. 3, lines 13-28); and forming an insulating film 214 to cover the trench for relaxing an internal stress of the substrate, wherein the insulating film comprises a first portion disposed to be opposed to a bottom of the trench, and a second portion disposed to be opposed to a side of said trench (Fig. 2C; col. 3, lines 29-34; and col. 3, line 62 - col. 4, line 2). However, the Chen et al. patent (Chen) does not anticipate, teach or suggest forming the insulating film such that: a first thickness of the first portion throughout is different from a second thickness of the second portion throughout, and the second thickness of the second portion is substantially uniform along the entirety of the second portion. Moreover, there is no teaching or suggestion

within the prior art of record to modify Chen by forming the insulating film such that: a first thickness of the first portion throughout is different from a second thickness of the second portion throughout, and the second thickness of the second portion is substantially uniform along the entirety of the second portion.

4. Applicants' argument presented in the remarks filed on 08 November 2005 with respect to the rejection under 35 USC 112, second paragraph made of record in the action mailed 09 August 2005 are persuasive (see page 9, lines 3-12). Accordingly, the rejection has been withdrawn.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (571) 272-1846. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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TMT
23 January 2006

A handwritten signature in black ink, consisting of a large, stylized 'M' followed by a horizontal line and a small flourish.

Mary Wilczewski
Primary Examiner